

**TECHNICAL REVIEW DOCUMENT**  
**for**  
**RENEWAL OPERATING PERMIT 00OPEP229**

**NuStar Logistics, LP – Colorado Springs Terminal**  
El Paso County  
Source ID 0410548

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**I. PURPOSE:**

This document establishes the basis for decisions made regarding the Applicable Requirements, Emission Factors, Monitoring Plan and Compliance Status of Emission Units covered within the Operating Permit proposed for this site. The original Operating Permit was issued January 1, 2003 and expired on January 1, 2008. This narrative is intended only as an adjunct for the reviewer and has no legal standing. Conclusions in this document are based on information provided in the renewal application submitted January 2, 2007, additional administrative amendment modification information received September 22, 2008, similar operating permits, previous inspection reports, the original construction permits, as well as various phone and email communications with the applicant.

Please note that copies of the Technical Review Document for the original permit and any Technical Review Documents associated with subsequent modifications of the original Operating Permit may be found in the Division files as well as on the Division website at <http://www.cdphe.state.co.us/ap/Titlev.html>

Any revisions made to the underlying construction permits associated with this facility made in conjunction with the processing of this operating permit application have been reviewed in accordance with the requirements of Regulation No. 3, Part B, Construction Permits, and have been found to meet all applicable substantive and procedural requirements. This operating permit incorporates and shall be considered to be a combined construction/operating permit for any such revision, and the permittee shall be allowed to operate under the revised conditions upon issuance of this operating permit without applying for a revision to this permit or for an additional or revised construction permit.

In addition to the changes requested by NuStar in the renewal application and other modifications, the Division has included changes to make the permit consistent with recently issued permits, including comments made by EPA on other Operating Permits, as well as to correct errors or omissions identified during inspections and/or discrepancies identified during review of this renewal

## **II. SOURCE DESCRIPTION:**

This facility consists of a petroleum bulk station and terminal. Refined petroleum products, such as motor fuels, ethanol, and other fuel additives, are delivered by pipeline. The products are stored at the facility in storage tank, and distributed to the market via tanker trucks. The facility emissions are associated with eight (8) storage tanks, one (1) bottom loading tank truck rack with a vapor recovery system and a vapor combustion unit (VCU), and fugitive equipment leaks.

Based on the information provided in the renewal application and additional documentation, the only changes to the significant emission units are removing the methyl tert-butyl ether (MTBE) percentages from the emission calculation methodologies for the storage tanks, loading rack, and fugitive equipment leaks.

The loading rack (L-1) is equipped with a vapor combustion unit to control VOC and HAP emissions and has potential uncontrolled emissions of VOC over 100 tons/year. Therefore, the loading rack is subject to the compliance assurance monitoring (CAM) requirements.

The facility is located near Colorado Springs, Colorado in El Paso County. The area in which the terminal operates is designated as attainment for all criteria pollutants. There are no affected states within 50 miles of the terminal. There are no Federal Class I designated areas within 100 kilometers of the terminal.

Based on the information provided by the applicant, this source is categorized as a minor stationary source for PSD as of the issue date of this permit. Any future modification which is major by itself (Potential to Emit of  $\geq 250$  TPY) for any pollutant listed in Regulation No. 3, Part D, Section II.A.42 for which the area is in attainment or attainment/maintenance may result in the application of the PSD review requirements.

### **MACT and NESHAP Applicability**

#### **Subpart R – Gasoline Distribution Facilities, Bulk Gasoline Terminals, and Pipeline Breakout Facilities NESHAP**

This facility is subject to the control requirements of 40 CFR Part 63, Subpart R (National Emission Standards for Gasoline Distribution Facilities, Bulk Gasoline Terminals, and Pipeline Breakout Facilities) (§§63.422, 63.423, and 63.424). The facility has the potential to emit more than ten (10) tons per year of any single hazardous air pollutant (HAP) and twenty-five (25) tons per year of any combination of HAPs. The facility became a major source because the owner failed to obtain a synthetic minor permit by the March 30, 1998 deadline. Please refer to the original Technical Review Document for a history of compliance issues pertaining to facility status and NSPS Subpart R.

### **BBBBBB – Gasoline Distribution GACT**

This facility is not affected by the National Emissions Standards for Hazardous Air Pollutants, Gasoline Distribution Generally Available Control Technology regulation (40 CFR 63, Subpart BBBBBB) since it is already subject to the control requirements of 40 CFR Part 63, Subpart R (§§63.422, 63.423, and 63.424). However, the facility has attempted to use the MACT BBBBBB monitoring standard as an alternative monitoring request to the temperature monitoring requirement of subpart R. The source submitted this request to EPA first on February 4, 2008. The first request was denied on April 14, 2008 since simply monitoring the presence of a flame for a thermal oxidation system is not sufficient since there are more direct means of monitoring proper operation and maintenance. NuStar submitted a second request to EPA on January 9, 2009, which included a monitoring and inspection plan in conjunction with monitoring the pilot flame using a heat-sensing device. The EPA denied this request on June 16, 2009.

### **Compliance Assurance Monitoring (CAM)**

The following emission points at this facility use a control device to achieve compliance with an emission limitation or standard to which they are subject and have pre-control emissions that exceed or are equivalent to the major source threshold (100 tons per year). They are therefore subject to the provisions of the CAM program set forth in 40 CFR Part 64 as adopted by reference into Colorado Regulation No. 3, Part C, Section XIV: **L-1 – Fuel loading rack**

The primary purpose of the CAM program is to supplement or enhance the Operating Permit monitoring requirements as necessary to adequately demonstrate compliance. The Division utilized a CAM plan previously developed for a similar facility to account for the need to revise the plan at this terminal. A heat sensing device, such as an ultraviolet beam sensor or thermocouple, installed in proximity to the pilot light to indicate the presence of a flame when the vapor combustor is required to be operated is adequate for CAM.

The CAM provisions require a source to monitor at least one indicator of performance per control device and to perform at least one parameter observation per 24 hours. NuStar will continuously monitor the presence of a flame when the vapor combustor is operating. The daily measurement frequency satisfies the minimum CAM requirement.

## **Emissions**

Emissions (in tons per year) at the facility are as follows:

Pollutant	Potential-to-Emit Emissions (tons/yr)	2004 Actual Emissions (tons/yr)
NO <sub>x</sub>	14.1	1.3
CO	35.2	6.5
VOCs	110.7	34.8
Single HAP	8.0	1.9
Combined HAPs	20.0	4.6

## **Emissions Sources**

The following sources are specifically regulated under terms and conditions of the Operating Permit for this terminal:

Storage tanks:

- E001 – Tank S-4M1 – Internal floating roof tank with a capacity of 168,000 gallons
- E002 – Tank S-30M1 Internal floating roof tank with a capacity of 1,260,000 gallons
- E003 – Tank S-30M2 Internal floating roof tank with a capacity of 1,260,000 gallons
- E004 – Tank S-30M3 Internal floating roof tank with a capacity of 1,260,000 gallons
- E005 – Tank S-40M1 Internal floating roof tank with a capacity of 1,680,000 gallons
- E006 – Tank S-55M1 Internal floating roof tank with a capacity of 2,310,000 gallons
- E007 – Tank S-55M2 Internal floating roof tank with a capacity of 2,310,000 gallons
- E008 – Tank S-80M1 Internal floating roof tank with a capacity of 3,360,000 gallons
- E009 – Fuel loading rack L-1 and associated vapor collection system and vapor combustion unit
- E010 – Fugitive emissions from equipment leaks

The source submitted several APENs for equipment exempt from APENs, construction permits, as well as operating permits:

- Tank S-100 was included original operating permit because the tank was subject to recordkeeping requirements in 40 CFR Part 60 Subpart Kb. Effective October 15, 2003, revisions were made to NSPS Subpart Kb and under these revisions tanks that have a capacity greater than 75 m<sup>3</sup> (19,813 gal) but less than 151 m<sup>3</sup> (39,889 gal) storing a liquid with a maximum true vapor pressure less than 15 kPa are exempt from the provisions of 40 CFR Part 60 Subpart Kb. Since the tank has emissions below APEN de minimus levels identified in Regulation No. 3 Section II.D.1.a and since the tank is no longer subject to 40 CFR Part 60 Subpart Kb, the tank is no longer subject to APEN reporting requirements and can be considered insignificant activity.

- The Oil Water Separator, included in the original permit, is not subject to any of the requirements of NSPS or NESHAP and has uncontrolled emissions below the threshold as identified in Regulation No. 3, Section II.D.1.a.
- Petroleum Contact Water Tanks are exempt from operating permits under Regulation No. 3, Part C, Section II.E.3.a and II.E.uu, from construction permits under Part B Section II.D.1.a and II.D.1.m and from APENs under Part A, Section II.D.1.a.

The construction permits for Tank S-100 and the Oil Water Separator, 99EP0207 and 99EP0208, respectively, have been cancelled due to the aforementioned exemptions. Both pieces of equipment have been removed from the specific permit conditions and added to the list of insignificant activities.

### **Accidental Release Program (112(r))**

Based on the information provided by the applicant, this facility is not subject to the provisions of the Accidental Release Prevention Program (Section 112(r) of the Federal Clean Air Act).

### **Emission Factors**

From time to time published emission factors are changed based on new or improved data. A logical concern is what happens if the use of the new emission factor in a calculation results in a source being out of compliance with a permit limit. For this operating permit, the emission factors or emission factor equations included in the permit are considered to be fixed until changed by the permit. Obviously, factors dependent on the fuel sulfur content or heat content cannot be fixed and will vary with the test results. The formula for determining the emission factors is, however, fixed. It is the responsibility of the permittee to be aware of changes in the factors, and to notify the Division in writing of impacts on the permit requirements when there is a change in factors. Upon notification, the Division will work with the permittee to address the situation.

## **III. Discussion of Modifications Made**

### **Source Requested Modifications**

The source requested that the company name, responsible official, and company be updated to current information. NuStar (nee Valero) also requested that MTBE is removed from the HAP emissions calculations and 2,2,4 – Trimethylpentane (TMP) is added. HAP vapor mass fractions and liquid mass fractions were also updated to reflect revised APENs that derive these values from fuel analysis and associated EPA Tanks 4.0.9d calculations.

The source also notified the Division of the pending EPA determination regarding the Subpart R alternative temperature monitoring request, which was ultimately denied. After EPA's disapproval of this request, it was established that NuStar could perform an additional stack test to set a new operating temperature. If the stack test indicated that

they could achieve less than 10 mg/L loaded at a lower temperature, maintaining the VCU at that temperature would be sufficient in demonstrating compliance with Subpart R. Operating the VCU at a lower temperature would save NuStar from using excess fuel for the gas-assisted unit.

In August 2010, NuStar submitted revised APENs requesting new emission limits on the eight (8) storage tanks. The requested limitations were based on calculations from the most recent version of EPA Tanks, 4.0.9.d. NuStar also provided more detailed information about their additive storage tanks listed as insignificant activity.

The source's requested modifications were addressed as follows:

- Tables 2.2, 3.1, and 4.2 were updated to include 2,2,4 – TMP and the most up-to-date HAP fractions. MTBE was removed from all tables.
- Language regarding the terms under which a new operating parameter value can be set was added in Condition 3.6.8.
- Table 2.1 was modified to reflect the requested new limitations.
- The list of insignificant activities was updated to include capacity descriptions of the additive storage tanks.

### **Other Modifications**

The Division has included changes to make the permit more consistent with recently issued permits, included comments made by EPA on other Operating Permits, as well as correct errors or omissions identified during inspections and/or discrepancies identified during review of this renewal.

The Division has made the follow revisions, based on recent internal permit processing decisions and EPA comments. These changes are as follows:

### **Page following Cover Page**

- Monitoring and compliance periods and report and certification due dates are shown as examples. The appropriate monitoring and compliance periods and report and certification due dates will be filled in after permit issuance and will be based on the permit issuance date. Note that the source may request to keep the same monitoring and compliance periods and report and certification due dates as were provided in the original permit. However, it should be noted that with this option, depending on the permit issuance date, the first monitoring period and compliance period may be short (i.e. less than 6 months and less than 1 year).
- Added language specifying that the semi-annual reports and compliance certifications are due in the Division's office and that postmarks cannot be used for purposes of determining the timely receipt of such reports.

## Section I – General Activities and Summary

- Condition 1.1 is revised to update the source description.
- Condition 1.4 is modified to reflect current state-only enforceable conditions.

## Section II – Specific Permit Terms

- Conditions 2.5.3 and 3.5.3 requiring notification of construction and initial startup dates was removed.
- Conditions 2.6 and 4.3 was expanded to include more detail regarding the requirement of Subpart R

### Section II.3: Loading Rack with Vapor Recovery Unit and Vapor Combustion Unit (VCU)

- Condition 3.7 was added to incorporate the NESHAP General Provisions.
- Condition 3.8, the source compliance stack test requirement, was previously Condition 3.7.
- Condition 3.9, the opacity requirement has been updated to reflect similar Operating Permits. This condition was previously Condition 3.8.
- Condition 3.11, the CAM plan requirement, was incorporated.

### Section II.4: Fugitive VOCs Emissions from Equipment Leaks

- This condition and associated table were updated to reflect other similar current Operating Permits and EPA's *Protocol for Equipment Leak Emission Estimates*. The language in the condition has not significantly changed. Please note the units of the emission factors are lb/component-hr and no longer kg/component-hr.

### Section II.5: Oil Water Separator – deleted due to exemption explained above.

### Section II.6: Special Condition – deleted to eliminate redundancy.

### Section II.5 (new): Compliance Assurance Monitoring

- This section has been added to include the compliance assurance monitoring requirements for the vapor control system installed on the truck loading rack at the facility.

## Section III: Permit Shield

- Updated the Regulation No. 3 citation for the permit shield.
- Permit shield for Tank S-100 is removed, since it is now considered insignificant activity.
- Updated streamlined language to the current version (4/16/2009).

## Appendices B, C, and D

- Language has been updated to reflect recently issued permits.

## Appendix G

- Included the CAM plan for the loading rack with vapor recovery unit and vapor combustion unit.